



## Protocol for Water System Activities that Impact Lead Services

### I. Lead Service Leaks

MWW will respond to a report of a leak and investigate. If the leak is determined to be on a service, the investigator will determine if it is on the “city” side or the “private” side of the service. If the leak is not causing a safety hazard or property damage, water will be kept “on” while preparations are made to fix the leak so that there will be water to the building. Water will be turned off at the time of excavation.

#### Leak on “city side”

MWW will

1. Inform resident, property owner and registered agent (if known) of likelihood of lead service and work that will be done, risks of lead, and importance of flushing as per the Employee Script and Lead Service Line Questionnaire.
2. Strongly encourage owner to replace their side of the service at the same time as MWW replaces the “city” side, as this will reduce risk of lead in drinking water and cost will likely be lower if coordinated with MWW work.
3. Notify MHD of service leak by transmitting the completed questionnaire to the WatLeadSurvey@Milwaukee.gov email group.
4. Offer pour-through filter to customer at MWW expense.
5. Replace service from water main up to and including curbstop. A service insulator will be installed between the curbstop and remaining private lead service to prevent galvanic corrosion.
  - a. If customer is willing and conditions permit, allow private plumber hired by customer to utilize excavation to replace private service.
  - b. Otherwise, complete the MWW service replacement and close the excavation.

It may be necessary to turn off a section of the water main in order to replace the service, in which case adjacent properties will be without water for some period of time. If between 6:00 a.m. and 10:00 p.m., properties where water was turned off will receive the door hanger and brochure. If between 10:00 p.m. and 6:00 a.m., MWW will return during daylight to drop off the door hanger and brochure.
6. Ask if customer is interested in having their water tested for lead at no cost to them. From those properties agreeing to have their water tested, Water Quality Section will arrange for collection of 12 consecutive 1-liter samples after six-hour stagnation, plus a 13th well-flushed



sample. One set will be collected as soon as possible after service replacement, preferably within 24 hours.

- a. Results will be shared with MHD after analysis. MHD will call all with vulnerable populations and all with lead > 15 µg/L. If Lead > 15 ug/L, MHD will advise resident to perform whole house flush again, and reemphasize how to reduce exposure to lead. Consider resampling based on extent of lead > 15 µg/L. (There is no “baseline” information against which to compare these results.)
  - b. Test results will be mailed to residents with
7. After about one month, Water Quality Section will ask customer to again collect 12 consecutive 1-liter samples after six-hour stagnation, plus one well-flushed sample. Residents will be mailed written test results and tailored outreach consistent with sample test results, and Lead Awareness brochure.
8. MWW and MHD will periodically review sample results to see if conclusions can be drawn about lead at customer’s tap after partial or full lead service line replacements. Cost and benefits of continued sampling and of format of sampling will be periodically evaluated, while maintaining protection of public health, and be mutually agreed upon.

### Leak on “private side”

MWW will

1. Inform resident, property owner and registered agent (if known) that leak must be fixed, likelihood of lead service, risks of lead, and importance of flushing as per the Employee Script and Lead Service Line Questionnaire.
2. Strongly encourage owner to replace their side of the service rather than repair it, as this will reduce risk of lead in drinking water.
3. If owner is willing to consider replacing their side,
  - a. Offer info on process to replace service and various financing options available.
  - b. Establish that MWW is willing to replace the “city side” at the same time and this will likely decrease cost to the owner to replace their side.
  - c. Provide a list of plumbing contractors who can complete/conduct the owner/private side replacement.
4. If owner opts to replace their side of the service, MWW will replace the “city side” of the service from the water main up to and including the curbstop. **The procedures for “Lead Service Leaks, Leak on “city” side”, steps 3 through 7, will be used.**
5. If owner declines,
  - a. Emphasize whole-house flushing after work is completed and leave brochure.
  - b. Offer pour-through filter at MWW expense.
  - c. Advise customer that if they decide to replace their side of the service at a later date, to please inform MWW via contact information on Supervisor’s business card which was left at the time they were notified of the leak. MWW will try to coordinate replacement of “city” side with work by owner.
  - d. Continue with normal MWW “Owner’s Leak” process.
6. Notify MHD of service leak by transmitting the completed questionnaire to the WatLeadSurvey@Milwaukee.gov email group.

## II. Lead Service Line Identified During Water Main Relay Construction Work

MWW will

1. Inform resident, property owner and registered agent (if known) that water service is made of lead, work that will be done, risks of lead, and importance of flushing as per the Employee Script and Lead Service Line Questionnaire.
2. Follow steps 2 through 8 of “Lead Service Leaks, Leak on “city” side”.

## III. Lead Service Line Disruption During Sewer Construction Work

Water service lines made of lead may be disturbed during sewer construction projects. MWW is currently investigating how these situations will be identified and who will coordinate the response. This section will be expanded when a procedure has been identified. **If lead services are severed, the procedures for “Lead Service Leaks, Leak on “city side” will be used.**

## IV. Work Impacting Curb Stops or Water Meters

If a lead service line is severed during replacement of the curb stop or water meter valve(s), **the procedures for “Lead Service Leaks, Leak on “city side”, steps 1 through 8, will be used.**

When the curbstop or meter valves are operated by MWW staff, and the lead service line is not severed, MWW will

1. Provide resident with notification that water service is likely to be made of lead, information on importance of whole-house flushing and lead awareness via the door hanger and brochure, to be left at the premise.

## V. Repairing Water Main Breaks When Lead Services are within the Shutoff Area

A water main break can require an emergency shutoff (if creating hazard or property damage) in which case notices that water will be turned off are not able to be provided to residents. If the situation is not an emergency, the leak can be “throttled” (flow restricted to reduce wasted water but main remains pressurized and hydrants remain operable) and the main break repair will be scheduled and residents will be notified in advance of the shutoff. Water must be turned off to the section of the water main where the break is located so that the crew can safely excavate and repair the break. The services

themselves may or may not be damaged during the break or repair. While the main is off, there can be flow reversals from building plumbing and services which could dislodge particles from the plumbing. MWW disinfects the pipe in the area of the break and does extensive flushing of the water main using hydrants before the repaired water main is put back into service. Flushing of services is prudent whether the service is made of lead or copper.

In non-emergency situations, if the water services are likely to be made of lead, MWW will

1. Notify residents before the water is shut off that the water service is likely to be made of lead, provide the brochure, and tell residents about the importance of whole-house flushing after water main is returned to service. If no response, leave door hanger and brochure on the door. **If lead services are severed, the procedures for "Lead Service Leaks, Leak on "city" side", 1. through 8. above, will be used.**
2. At some repair locations, conditions permitting, ask if customer is interested in having water tested for lead at no cost to them. From those who wish to have their water tested, provide instructions, chain of custody forms and bottles to collect two samples:
  - a. The first liter of water that comes out of the kitchen tap when water is restored. The aerator will be removed for this sample if possible. (The idea is to capture particles that may have come loose during flow reversal.)
  - b. A well-flushed sample collected after the whole-house flushing procedure has been carried out. Aerator will remain off for this sample to simplify procedure for residents.
3. If 1. and 2., above, have not been carried out because it was between 10:00 p.m. and 6:00 a.m., MWW will return during daylight hours and knock on the door. The door hanger and brochure will be handed to the resident or placed on the doorknob if no response.

In emergency situations, when water services are likely to be made of lead, MWW will:

1. Notify residents after the main break has been controlled and before it is returned to service that the water service is likely to be made of lead, provide the information packet, and tell residents about the importance of whole-house flushing after water main is returned to service. If no response, leave door hanger and brochure on the door. **If lead services are severed, the procedures for "Lead Service Leaks, Leak on "city side"', 1. Through 8., above, will be used.**
2. The situation will determine if there is an opportunity here for sample collection.
3. If 1. above, has not been carried out because it was between 10:00 p.m. and 6:00 a.m., MWW will return during daylight hours and knock on the door. The door hanger and brochure will be handed to the resident or placed on the doorknob if no response.

## VI. Work on Private Plumbing With Lead Service Line

The brochure should be available at the Permit Center and be given to plumbers when they pull permits. Need to discuss this with Plumbing Inspections/Permit Center.

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